Introduction to ITS/CVO

(Intelligent Transportation Systems/ Commercial Vehicle Operations)

Picture Definitions

This handout identifies the pictures used in the Introduction to ITS/CVO module overheads, so that Trainers can refer to them as examples of ITS technologies as the course information is presented to the class.

The pictures are categorized by ITS/CVO program area:

SA = Safety Assurance
ES = Electronic Screening
CO = Carrier Operations
(N/A = Caption Information Not Available)

The definition for each picture contains:

- A general title for the technology shown (G)
- A specific description of the technology shown (S)
- The manufacturer of the equipment shown (M)
- A caption for the image (C)

Safety Assurance

SA-1

G: Advanced Brake Tester (ABT)
S: Flat Plate
M: Hunter Engineering
C: Vehicle rolls in and stops on plates. Plates measure force, length, and balance of brakes. Testing time is 60 seconds. Not portable.

SA-2 (Same as SA-1)

G: Advanced Brake Tester (ABT)
S: Flat Plate
M: Hunter Engineering
C: Vehicle rolls in and stops on plates. Plates measure force, length, and balance of brakes. Testing time is 60 seconds. Not portable.

SA-3

G: Roadside Portable Computer
S: ASPEN, with Inspection Selection System
M: (Various Manufacturers)
C: Roadside Safety Inspectors use portable computers to save time during an inspection and when reporting results.

Safety Assurance (Continued)


Photo Courtesy of Hicklin Engineering Company

SA-4

G: Advanced Brake Tester (ABT)
S: Roller Dynamometer
M: Hicklin Engineering Company
C: Vehicle rolls onto the rollers and driver applies the brake. The rollers then move the tires, testing the performance of the brakes. Like other ABTs, it removes the need for an inspector to physically go underneath the vehicle. System is portable.


Photo Courtesy of Hunter Engineering Company

SA-5 (Same as SA-1, except an outdoor application)

G: Advanced Brake Tester (ABT)
S: Flat Plate
M: Hunter Engineering
C: Vehicle rolls in and stops on plates. Plates measure force, length, and balance of brakes. Testing time is 60 seconds. Not portable.


Photo Courtesy of Hunter Engineering Company

SA-6 (Same as SA-1)

G: Advanced Brake Tester (ABT)
S: Flat Plate
M: Hunter Engineering
C: Vehicle rolls in and stops on plates. Plates measure force, length, and balance of brakes. Testing time is 60 seconds. Not portable.

Safety Assurance (Continued)


Photo Courtesy of B & G Technologies

SA-7

G: Advanced Brake Tester (ABT)
S: Torque Tester
M: B & G Technologies
C: Vehicle rolls onto this portable device. Then the device grabs the wheels, lifts the vehicle, and starts to twist the axle forward checking brake performance.


Photo Courtesy of B & G Technologies

SA-8 (Same as SA-7)

G: Advanced Brake Tester (ABT)
S: Torque Tester
M: B & G Technologies
C: Vehicle rolls onto this portable device. Then the device grabs the wheels, lifts the vehicle, and starts to twist the axle forward and back checking brake performance.

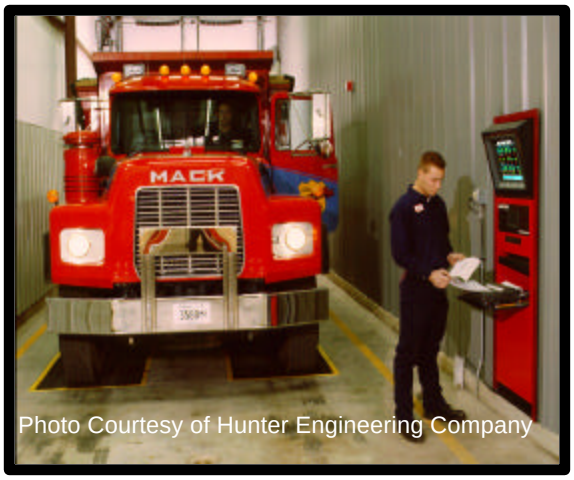


Photo Courtesy of Hunter Engineering Company

SA-9 (Same as SA-1)

G: Advanced Brake Tester (ABT)
S: Flat Plate
M: Hunter Engineering
C: Vehicle rolls in and stops on plates. Plates measure force, length, and balance of brakes. Testing time is 60 seconds. Not portable.

Safety Assurance (Continued)

Photo Courtesy of Hicklin Engineering Company

SA-10 (Same as SA-4)

G: Advanced Brake Tester (ABT)
S: Roller Dynamometer
M: Hicklin Engineering Company
C: Vehicle rolls onto the rollers and driver applies the brake. The rollers then move the tires, testing the performance of the brakes. Like other ABTs, it removes the need for an inspector to physically go underneath the vehicle. System is portable.

Carrier Operations

CO-1

G: Intermodal Portable Computers
S: N/A
M: N/A
C: Portable computers are used to track cargo across several modes of transportation. These systems are also used for “Total Asset Visibility” by carriers, shippers, and customers, including the Department of Defense.

CO-2

G: Portable Computer
S: N/A
M: N/A
C: Portable computers are used to track the location of packages for both carriers and shippers/customers.

CO-3

G: Portable Computers
S: Onboard diagnostic application
M: N/A
C: Motor carrier vehicle maintenance personnel use portable computers that check onboard systems such as engine diagnostics to identify problems during routine checks. Clipboard reads: “Maintenance Log”, and has bar codes on it.

Carrier Operations (Continued)

CO-4

G: Portable Computers
S: Onboard computer applications
M: N/A
C: Drivers can use onboard computers to communicate with dispatchers, monitor the engine and cargo status, and check traffic conditions.

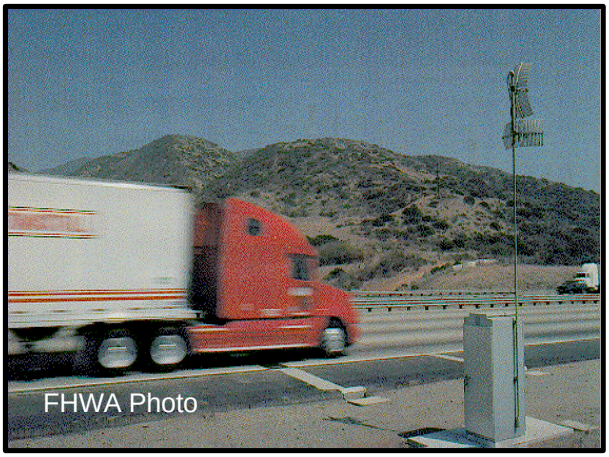
CO-5 (Same as CO-4)

G: Portable Computers
S: Onboard computer applications
M: N/A
C: Drivers can use onboard computers to communicate with dispatchers, monitor the engine and cargo status, and check traffic conditions

CO-6 (Same as CO-4)

G: Portable Computers
S: Onboard computer applications
M: N/A
C: Drivers can use onboard computers to communicate with dispatchers, monitor the engine and cargo status, and check traffic conditions

Electronic Screening



ES-1

G: Weigh-in-Motion (Mainline)
S: N/A
M: N/A
C: Vehicles that are safe and legal are electronically screened past weigh and safety checkpoints.

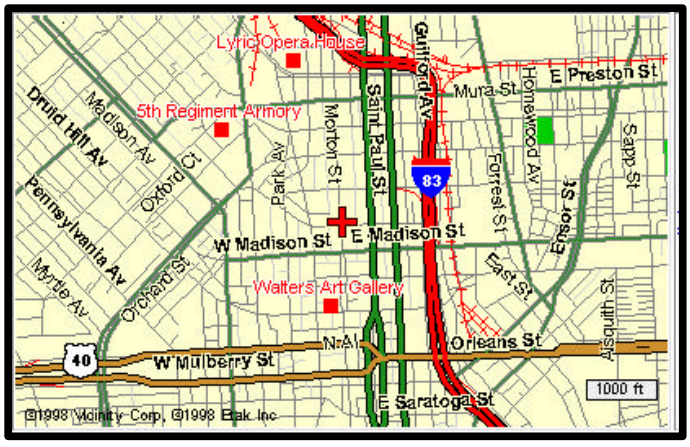
ES-2

G: Roadside communications
S: DSRC Transponder
M: Hughes
C: Cab-mounted transponder with red, yellow, and green LED indicators. 64 Bytes of memory. Total cost: $100 - 200.

General Photographs

General Photographs (Continued)

Weigh Station



Electronic Mapping Software

General Photographs (Continued)

General Photographs (Continued)